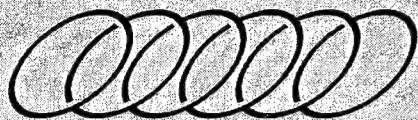


(KEH-M4500, KEH-M4000) MULTI-CD CONTROL  
FM/MW/LW TUNER DECK AMPLIFIER  
AMPLIFICATEUR PLATINE DE SYNTONISATION  
FM/PO/GO DE COMMANDE MULTI-CD

(GEH-M2000) MULTI-CD CONTROL  
FM/MW/LW RECEIVER  
RECEPTEUR  
FM/PO/GO DE COMMANDE MULTI-CD



# OWNER'S MANUAL MODE D'EMPLOI

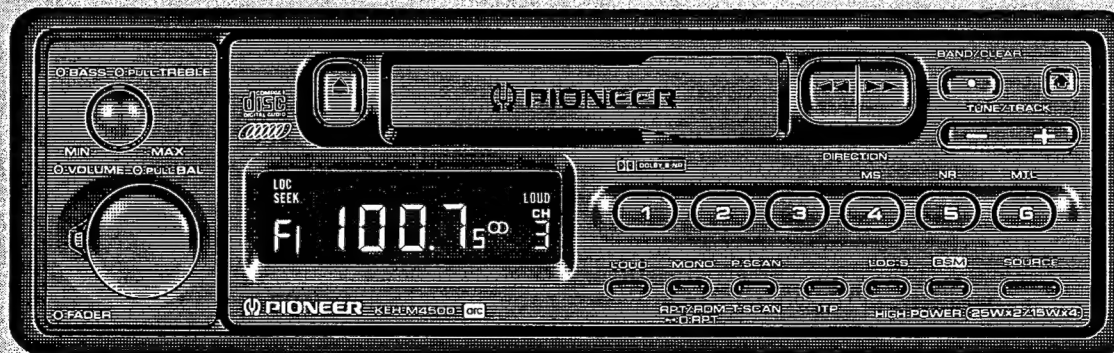
Thank you for purchasing this PIONEER product. Before attempting operation, be sure to read this manual.

Nous vous remercions d'avoir acheté cet appareil PIONEER. Avant de l'utiliser, prendre soin de lire ce manuel.

Vielen Dank für den Kauf dieses PIONEER Produkts. Diese Bedienungsanleitung vor der Inbetriebnahme sorgfältig durchlesen.

Muchas gracias por la adquisición de este producto PIONEER. Antes de tratar de operarlo, lea atentamente este manual.

Dank U zeer voor de aanschaf van dit PIONEER-product. Lees deze gebruiksaanwijzing goed door, voordat het toestel in gebruik genomen wordt.



KEH-M4500

 **PIONEER®**  
*The Art of Entertainment*

KEH-M4500 KEH-M4000  
GEH-M2000

## ENGLISH

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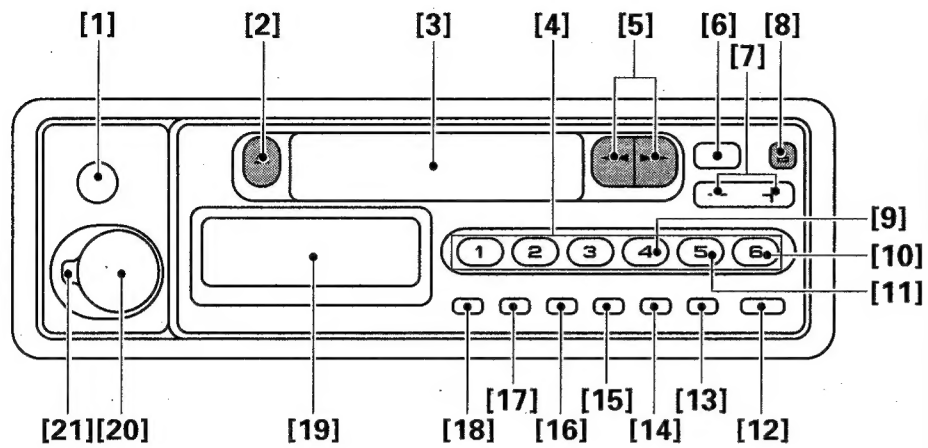


Fig. 1. Abb. 1.

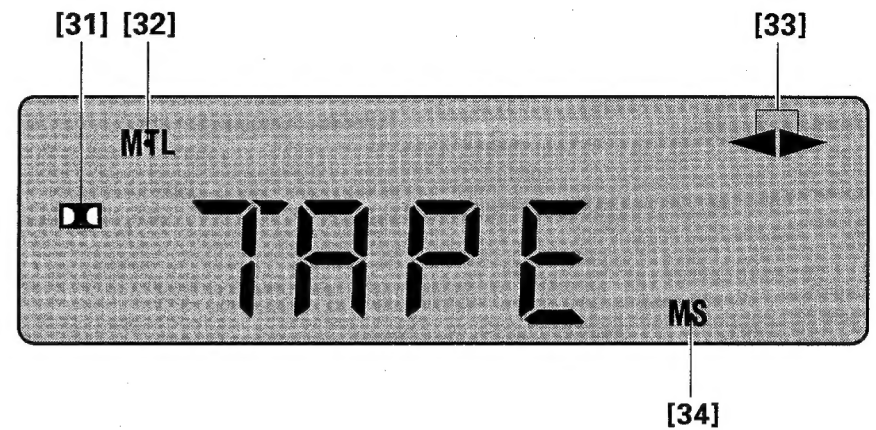


Fig. 3. Abb. 3.

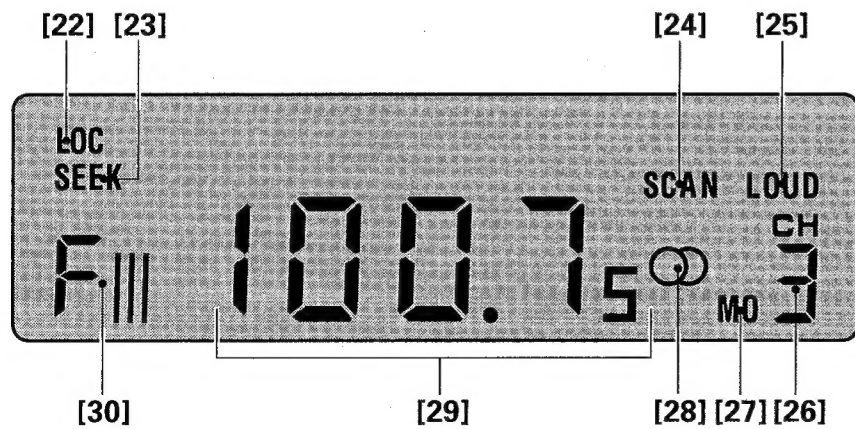


Fig. 2. Abb. 2.

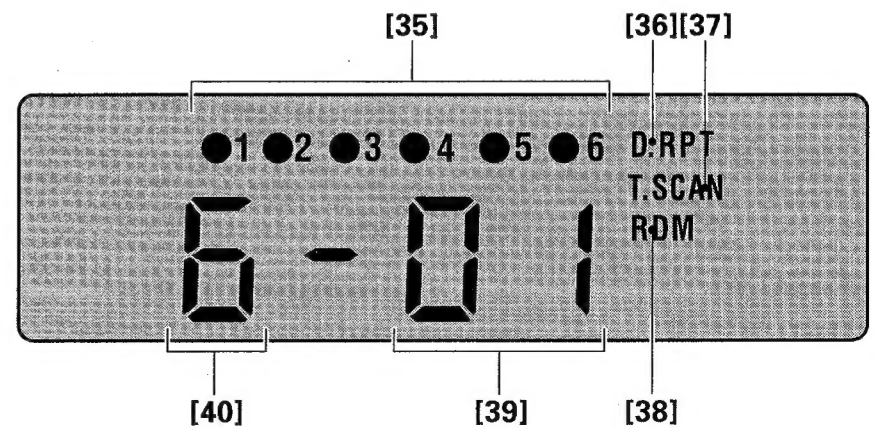


Fig. 4. Abb. 4.



## Composition of manual

This manual applies to the KEH-M4500, KEH-M4000 and GEH-M2000. However, the illustrations show the KEH-M4500. The KEH-M4000 and GEH-M2000 have following features which differ to the KEH-M4500.

### KEH-M4000

Does not include dolby B NR, tape selector and music search functions.

### GEH-M2000

Does not include the tape deck function.

- Fig.1 shows KEH-M4500 and KEH-M4000. The GEH-M2000 does not include buttons [2], [5] and the door [3].

## Precautions

- When replacing fuses, be sure to use only fuses of the rating prescribed on the fuse holder.
- Never remove the top case of the unit to attempt check or repairs. If operation of the unit is abnormal, contact your dealer or the nearest Pioneer Service Station.
- If the car's battery is disconnected for any reason, the preset memory will be erased and must be reprogrammed after reconnection of the battery.

### In case of trouble

When the unit does not operate properly, contact your dealer or the nearest authorized PIONEER Service Station.

## Using the Removable Front Panel

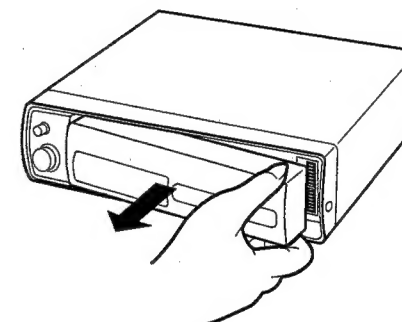
The front panel of this unit can be removed to prevent theft.

### Parts Identification (Fig. 1)

- [2] Eject
- [5] Fast Forward, Rewind/Direction Change
- [8] Detach button

### Detaching the Front Panel

1. Press button [8], and the right-hand side of the panel will eject.
2. To remove the front panel, pull its right-hand side toward you.



- Take care not to put pressure on the display or drop the front panel.

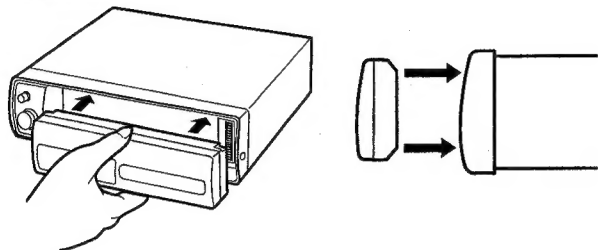
### Optional Protective Case

A separately sold protective case [AD-931] is available for the detached front panel. This case is highly recommended to protect the front panel from shocks and scratches.

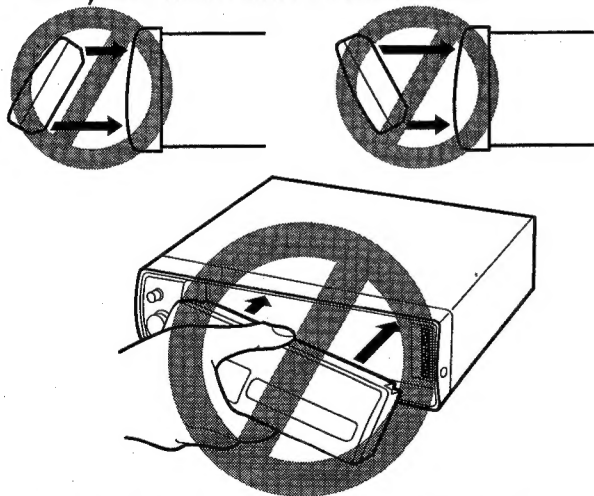
## Replacing the Front Panel

Push the front panel into the main body.

- When replacing the front panel, do not put pressure on the display or control buttons.



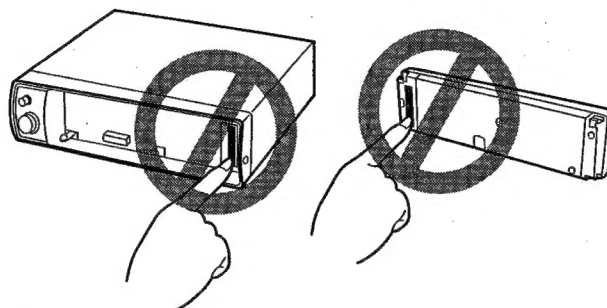
- Install the front panel holding it parallel to the main unit. Installing the panel tilted, as shown in the illustrations below, may cause the hook on the front panel to destroy the main unit's electrodes.



- Do not install the front panel while holding down buttons [2], [5] and [8] in Fig.1. Doing so may destroy the buttons and the main unit.
- Note that if the front panel is not attached correctly, pushing button [8] may not release the panel, and the other control buttons may not function.

## Precautions

- Do not touch the contacts on the front panel or on the unit body, since this may result in poor electrical contact. If dirt or other foreign substances get on the contacts, wipe them with a clean, dry cloth.

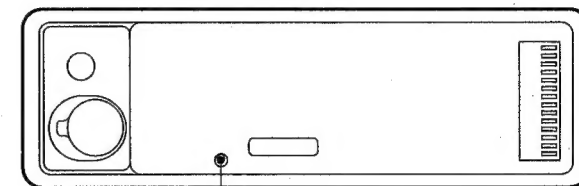


## Precautions When Handling the Front Panel

- Do not leave the front panel in any area exposed to high temperatures or direct sunlight.
- Do not drop the front panel or otherwise subject it to strong impact.
- Do not allow such volatile agents as benzene, thinner, or insecticides to come into contact with the surface of the front panel.
- Never try to disassemble the front panel.

## Using the Clear Button

- The clear button can be located on the unit after you have removed the front panel. Refer to the previous page to find out how to remove the front panel.



[41] Clear Button

Once all wiring is complete, press button [41] with a thin, pointed object. Though not a normal occurrence, the microprocessor which controls the operation of this unit can be affected by electrostatic noise. This generally is indicated by such symptoms as no power being supplied when you switch the unit on, failure of buttons and controls, or an abnormal display. Should this happen, press button [41] with a thin, pointed object to reset the microprocessor.

## Adjusting Volume and Tone

### Parts Identification (Fig. 1)

- [1] Bass/Treble
- [2] Eject
- [3] Cassette Door
- [12] Source Selector
- [18] Loudness
- [19] Display
- [20] Volume/Balance
- [21] Fader

### Switching Power On

#### Tape

- GEH-M2000 does not include this tape deck function.

Insert the cassette tape through the Cassette Door [3], and the power will be automatically turned on to get the tape start being played back. To eject the tape, press the button [2].

#### Radio, Multi-play CD player

The unit incorporates priority cassette tape play. The unit will not switch to radio or multi-play CD player while a tape is inserted. Press button [2] to eject the tape.

- GEH-M2000 does not include tape deck function. Therefore, procedures mentioned above will not be necessary.

Press button [12] to switch the radio on. Press button [12] a second time to switch it off. When combined with the separately available multi-play CD player (CDX-M30, etc.), the unit will switch in the following order:

Multi-play CD player → Radio → OFF.

- Inserting a tape while listening to either the multi-play CD player or radio will switch the unit to tape play.

### Adjusting Audio

#### Adjusting Volume

Turn the control [20] to the right to raise the volume. Turn the control to the left to lower the volume.

#### Adjusting the Fader

Turn the control [21] upward to fade sound in the rear speakers. Turn the control downwards to fade sound in the front speakers.

- With a 2 speaker system, set the control in a central position.

#### Adjusting Bass

Turn the control [1] to the right to increase bass. Turn the control to the left to decrease bass.

#### Adjusting Treble

Pull the control [1] towards you until it clicks. Turn the control to the right while it is in this position to increase treble. Turn it to the left to decrease treble. After adjusting the control, push it back to its original position.

#### Adjusting Balance

Pull the control [20] towards you until it clicks. Turn the control to the right while it is in this position to fade sound in the left speaker. Turn it to the left to fade sound in the right speaker. After adjusting the control, push it back to its original position.

### Using the Loudness Function

Press button [18] and the "LOUD" indicator will appear on the display. This "loudness" function enhances both the high and low ranges of sound to give even more power to output even at low volumes.

## Using the Radio

### Parts Identification (Fig. 1)

- [4] Preset
- [6] Band
- [7] Tuning/Local Seek Sensitivity/Seek, Manual
- [12] Source Selector
- [13] Best Stations Memory (BSM)
- [14] Local Station
- [16] Preset Scan
- [17] FM Stereo/Mono
- [19] Display

### (Fig. 2)

- [22] Local Station
- [23] Seek
- [24] Preset Scan
- [26] Preset Number
- [27] FM Mono
- [28] FM Stereo
- [29] Frequency
- [30] Band

### Listening to the Radio

#### • Electronic Tuner

Frequency allocation differs depending upon the area. This unit has been designed in accordance with the frequency allocations for Western Europe, Asia, the Middle and Near East, Africa, Australia and Oceania. Use in other areas may result in improper reception of AM.

## KEH-M4500, KEH-M4000

The unit incorporates priority cassette tape play. The unit will not switch to radio play while a tape is inserted, so be sure to eject the tape when you wish to listen to the radio.

### 1. Press button [12] to switch the radio power on.

Press button [12] to switch the tuner on and off. Operations will be different when the unit is combined with a separately available multi-play CD player (CDX-M30, etc.). For details on "Switching Power ON" refer to the relevant clause, on page 6.

### 2. Press button [6] to select a band.

F I → F II → F III → M/L  
(FM1) (FM2) (FM3) (MW/LW)

Use Button [7] to switch between MW (531 — 1,602 kHz) and LW (153 — 281 kHz).

### 3. Use seek tuning to tune in a frequency.

Confirm that the SEEK indicator [23] is shown on the display (if not, press the (+) and (–) sides of button [7] at the same time). Press the (+) side of button [7] to automatically tune in the next higher receivable frequency, and the (–) side for a lower frequency.

### 4. Adjust volume and tone (see page 6).

### 5. Assign the tuned frequency to one of the buttons in Bank [4] (preset memory).

Press and hold down one of the button in Bank [4] for at least two seconds. The frequency is assigned to the selected button when the preset number [26] stops flashing on the display. Up to 18 FM stations (6 each for FM1, FM2 and FM3), and six MW/LW stations can be assigned to the preset memory buttons in Bank [4].

### 6. Once a frequency is assigned to a button in Bank [4], you just need to press that button to tune it in.

This also causes the number of the button pressed to appear at position [26] on the display.

## BSM (Best Stations Memory)

This function automatically locates stronger stations and automatically assigns their frequencies to the buttons in Bank [4], from strongest to weakest. It comes in handy when trying to find local stations while driving.

1. Press button [6] and select a band.
2. Holding down button [13] for about two seconds will start BSM search. At this time, "BSM" will flash on the display.
3. The frequency display will return once BSM search is complete, and frequencies are assigned to buttons 1 through 6 in Bank [4].
  - At the end of the BSM search, the displayed frequency is that assigned to button 1 of Bank [4].
  - If there are fewer than six strong stations in the area, some of the buttons in Bank [4] will not be assigned frequencies, so they will retain any frequencies assigned to them previously.
  - BSM search may take as long as 30 seconds in areas where there are few strong stations.
  - You can cancel BSM search by pressing button [13] again.

## Preset Scan Tuning

This function lets you automatically monitor the stations assigned to the preset buttons.

1. Press the button [16], and "SCAN" [24] will light up and the preset number [26] flash.

Each station assigned to the buttons in Bank [4] will be automatically tuned in for about eight seconds.

2. When you hear a station that you like, press button [16] again to cancel preset scan tuning and remain at that station.

## Adjusting Seek Sensitivity

The seek tuning function of this tuner lets you select between a local setting for reception of strong stations only, and a DX (distant) setting for reception of weaker stations. The local setting also has four seek tuning sensitivity levels for FM and two levels for MW/LW to match local conditions.

### Changing the Local Seek Sensitivity

1. Use button [6] to select a band.
2. Hold down the button [14] for more than two seconds, and the display will show you the current local seek sensitivity for about five seconds.
3. While the local seek sensitivity remains on the display, press the (+) side of button [7] to increase the sensitivity level, and the (–) side to decrease the level as shown below.

FM : L-1 ⇌ L-2 ⇌ L-3 ⇌ L-4

MW/LW: L-1 ⇌ L-2

The L-4 setting allows reception of only the strongest stations, while lower settings let you receive progressively weaker stations.

- The display of local seek sensitivity returns to the frequency when about 5 seconds have elapsed after the change of sensitivity.

### Switching between Local and DX

Press button [14] to switch between Local and DX (distant) seek tuning.

When "LOC" [22] is shown on the display, seek tuning is performed with the local seek sensitivity. Otherwise, seek tuning is performed with the DX seek sensitivity.

### Manual Tuning

Use manual tuning when stations are too weak to be picked up by seek tuning.

1. Press both (+) and (-) sides of button [7] at the same time to clear "SEEK" [23].
2. Each press of the (+) side of button [7] increases the frequency in 50 kHz steps in the FM band, 9 kHz in the MW band and 1 kHz in the LW band. Pressing the (-) side of button [7] decreases the frequency. Holding down either side of button [7] changes the frequency at high speed.

### Switching between FM Stereo and Mono

Generally, it is best to allow the ARC (Automatic Reception Control) function to automatically set the optimum listening conditions. When stereo broadcasting is received, "Ⓢ" [28] will appear on the display. When there is a large amount of noise, you can press button [17] for clearer mono reception ("MO" [27] will appear on the display).

## Using the Tape Deck

GEH-M2000 does not include this tape deck function.

### Parts Identification

(Fig. 1)

- [2] Eject
- [3] Cassette Door
- [5] Fast Forward, Rewind/Direction Change
- [9] Music Search (KEH-M4500)
- [10] Metal (KEH-M4500)
- [11] Dolby B NR (KEH-M4500)
- [19] Display

(Fig. 3)

- [31] Dolby B NR (KEH-M4500)
- [32] Metal (KEH-M4500)
- [33] Direction
- [34] Music Search (KEH-M4500)

### About cassette tapes

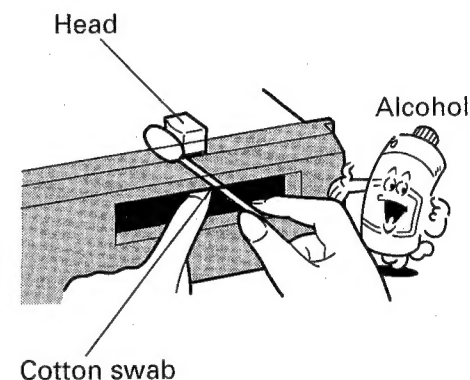
- Do not use tapes longer than C-90-type (90 min.) cassettes. Longer tapes can interfere with tape transport.
- Storing cassettes in areas directly exposed to sunlight or high temperatures can distort them and subsequently interfere with tape transport.



- Store unused tapes in a tape case where there is no danger of them becoming loose or being exposed to dust.

### Cleaning the head

If the playback head becomes dirty, sound quality will suffer. Periodically (once or twice a month) clean the head with a cotton swab soaked with alcohol.



### Listening to a tape

**1. Insert the cassette tape into the slot [3], and power will be turned on and the tape begin being played back.**

At this time, the tape running direction indicator [33] will light up.

**2. Adjust volume and tone (see page 6).**

**3. To eject the cassette tape, press the button [2].**

- Be sure to eject the tape when the front panel is removed, or the vehicle's ignition is turned OFF. Leaving the tape in the unit can deform the pinch roller causing wow and flutter during tape playback.



- A loose or warped label on a cassette tape may interfere with the eject mechanism of the unit or cause the cassette to become jammed in the unit. Avoid using such tapes or remove such labels from the cassette before attempting use.
- Do not try to eject the cassette immediately after insertion, as it will cause malfunction. Wait a few seconds.

### Changing Program

Push the fast forward and rewind buttons [5] together to switch from one side of the tape to the other (from Side A to Side B or vice versa).

### Using Fast Forward and Rewind

Since the transport can be in either direction, both the left and right high-speed tape transport buttons [5] can be regarded as fast forward/rewind buttons. For fast forward, press the high-speed tape transport button [5] that corresponds to the direction that is shown by the direction indicator [33]. When the end of the tape is reached, playback will automatically begin from the opposite side of the tape (Auto-reverse). For rewind, press the button [5] that is opposite that of the direction shown by the direction indicator [33]. When the end of the tape is reached, playback will automatically begin from the beginning of the same side of the tape (Auto-replay).

When you release fast forward/rewind, lightly press button [5] located on the opposite side of the one you pressed to fast forward or rewind.

- "◀▶" [33] will flash when the tape is fast forwarding or rewinding.

### Using Music Search (KEH-M4500)

#### Returning to the beginning of selection A

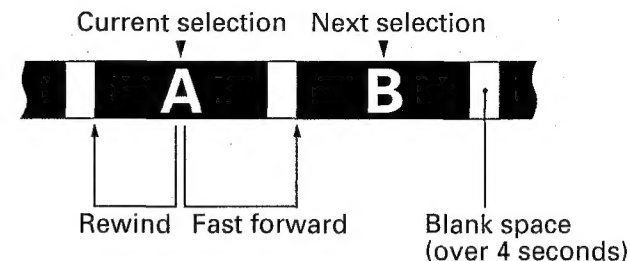
Press the button [9] ("MS" [34] appears) and then the high-speed tape transport button [5] for the direction opposite that is shown by the direction indicator [33]. Playback will automatically start from the beginning of selection A.

#### Moving from selection A to selection B

Press the button [9] ("MS" [34] appears) and then the high-speed tape transport button [5] that corresponds to the direction shown by the direction indicator [33]. Playback will automatically start from the beginning of selection B.

To enable regular fast forward/rewind operations, press the button [9] again ("MS" [34] turns off) to turn the function OFF. The following errors will cause the music search function to operate improperly, even though the unit is not malfunctioning.

- Unrecorded "blank" portions between selections less than 4 seconds → the blank portion cannot be detected by the unit.
- Pauses in recorded conversations longer than 4 seconds → the unit reads these as blanks between selections.
- Portions recorded at very low volume for more than 4 seconds → the unit reads these as blanks between selections.



### Dolby B NR (KEH-M4500)

To hear a tape recorded using a Dolby NR system, press the button [11]. ("□□" [31] appears.)

### Tape Selector (KEH-M4500)


When using metal tapes and chrome tapes, press button [10]. ("MTL" [32] appears.)

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol □□ are trademarks of Dolby Laboratories Licensing Corporation.

## Playing Compact Discs

### Precautions When Using the Multi-Play CD Control

- This model can be used as controller when an optionally available multi-play CD player (e.g., CDX-M30) is included in the system. Programmed play does not operate when used with the multi-CD player CDX-M70 or CDX-M100.
- See pages 10 through 13 for details on operation procedures.
- The Owner's Manual for the multi-play CD player does not contain an explanation of the CD controls for this unit. Read this Owner's Manual for details on proper operation and keep it handy for later reference.
- Immediately after the multi-play CD player is connected to the system, it may not operate properly. In this case, press the clear button of the main unit and the clear button of the multi-play CD player, and attempt operation again.

The Magazine Type Multi-Play CD players with  mark and the Mazazines with the same mark are compatible for 5-inch (12 cm) discs.

## Listening to the Compact Disc

### Parts Identification

#### (Fig. 1)

- [4] Disc Number search
- [6] Program Clear
- [7] Track Number Search/Fast Forward, Reverse
- [12] Source Selector
- [15] ITP (Instant Track Program)
- [16] Highlight Scan
- [17] Mode
- [19] Display

#### (Fig. 4)

- [35] Disc
- [36] Music Repeat/Disc Repeat
- [37] Highlight Scan
- [38] Random Play
- [39] Track Number
- [40] Disc Number

### KEH-M4500, KEH-M4000

The unit incorporates priority cassette tape play. The unit will not switch to multi-play CD player while a tape is inserted, so be sure to eject the tape when you wish to listen to CD play.

#### 1. Press button [12] to change the display to the Multi-Play CD player mode and to begin disc play.

Each press of button [12] changes the mode as follows: Multi-Play CD player → tuner → OFF

#### 2. Use the Disc Number Search function to select a disc.

Select the desired disc by pressing one of the buttons in Bank [4]. The number of the disc selected appears at position [40] on the display.

- Display [35] indicates whether the magazine is loaded or empty.
- If the number at position [40] on the display does not change when you press a button in Bank [4], it means that there is no disc loaded in that tray.

#### 3. Use Track Number search to select a track.

Confirm that Track Number is shown at Position [39] on the display. If not, press the (+) and (−) sides of button [7] at the same time. Press the (+) side of button [7] to increase the number at Position [39], or the (−) side to decrease the number. Holding either side of button [7] down changes the track number at high speed.

#### 4. Adjust volume and tone (see page 6).

#### 5. To stop disc play, press button [12].

At another press, the normal play resumes from about where it stopped.

- If you stopped operating a Multi-Play CD Player CDX-M100 in the middle of music and then restarted, the player resumes playing from the very beginning of the selection with which you stopped.

#### Note:

- After you press a button in Bank [4], it may take some time before play begins due to the time necessary to load and set the disc in the mechanism.

- This indicator HHHH flashes on the display and playback is automatically cut when the temperature around the multi-play CD player becomes too high. This protects the laser mechanism from serious damage. Listen to the radio unit the temperature returns to normal. (This functions only when your unit is used with a Multi-Play CD player CDX-M100.)

### Using Highlight Scan

Highlight Scan is designed to enable you to conveniently scan all pieces of music contained in the disc by playing 10 seconds each at your designated point of time after the start of the music. The starting time of play is set at one minute in factory. Therefore, the Highlight Scan begins one minute after the start unless you designate it otherwise.

When you do not want to change the factory-set time:

- When used in conjunction with the old type Multi-Play CD Players [CDX-M70] or [CDX-M100], the place where playback starts in Highlight Scan is fixed as the start of each track. Also, it is not possible to adjust this time setting.

1. Press button [16] ("T.SCAN" [37] appears).
2. The contained pieces of music will be played in sequence for 10 seconds each one minute after the beginning.
3. Press button [16] again when your selected piece comes, and it will continue to play. At this point, the Highlight Scan discontinues to operate.

- The previous function automatically resumes when a piece of music with which Highlight Scan began returns.

### Changing the starting time of Highlight Scan

When you want to set the starting time of the Highlight Scan to 30 seconds:

1. Press button [7], (+) and (-) sides simultaneously, and time numerals will be displayed.
  2. Keep pressing either (+) or (-) side of button [7] until the numerals reaches 30.
  3. Hold down button [16] for two or more seconds, and "T.SCAN" [37] appears and the Highlight Scan will begin. 30 seconds after the start of the next piece of music.
- The starting time of Highlight Scan can be designated at ten or tens of seconds only. A tenth or tenths of seconds can be disregarded.
  - If a piece of music ends before your designated point of time at which Highlight Scan starts, the scanning is performed for its beginning 10 seconds.
  - If a piece of music lasts less than 10 seconds, so does the Highlight Scan.
  - You may wish to change the starting time longer without suspending the function. You may do so, however, only to a relatively long-playing piece of music because, as a matter of course, the time cannot be set so as to come after the end of the music.

### Using Disc Repeat, Music Repeat and Random Play

Each Press of button [17] causes the mode to change as follows:

Music Repeat ("RPT" [36] appears) → Random Play ("RDM" [38] appears) → Normal

If button [17] is pressed for 2 or more seconds, the mode changes to Disc Repeat ("D.RPT" [36] appears).

- When Disc Repeat or Music Repeat are not operational, the compact discs contained in the magazine will play sequentially from beginning to end, and then start from disc 1 again.

#### Music Repeat

1. To repeat the music you are listening to, select the repeat mode ("RPT" [36] appears).
2. To cancel music repeat, press button [17] to turn off "RPT" [36].

#### Random Play

1. To play music randomly, select the random play mode ("RDM" [38] appears). Once the current track has been played, the microprocessor will randomly select the next and subsequent tracks.
  2. To cancel random play, press button [17] to turn off "RDM" [38].
- Since selections are played in random order, the same selection may be played twice in succession.
  - When a Multi-Play CD Player CDX-M100 is used, random selection is made from a disc being played.

### Disc Repeat

The Disc Repeat function causes the same disc to play repeatedly.

1. Press button [17] for 2 seconds or more while the desired disc is being played. The mode will change to Disc Repeat mode ("D.RPT" [36] appears).
2. To cancel Disc Repeat, again, press button [17] for 2 seconds or more and turn off "D.RPT" at [36].

### Using Fast Forward and Reverse

1. Press simultaneously both (+) and (-) sides of the button [7].  
At this time the display will show the amount of elapsed disc play time.
2. Press the (+) side of button [7] for fast forward, and the (-) side for reverse.
  - Sound is output during fast forward and reverse operations.
  - The display counts down the number of seconds between tracks if the spacing is rather large (-'00"- '01").

### Using Program Play

This function lets you program the play sequence of all of the tracks contained on the compact discs loaded in the magazine.

- The ITP function will not operate when connected to either the CDX-M70 or CDX-M100.
- Up to 32 selections can be programmed for a single magazine.
- Up to 16 different magazines (max. 32 selections per magazine) can be programmed individually. If you program more than 16 magazines, old programs are automatically replaced by new ones.
- Automatic Magazine Program Selection (AMPS) retrieves the right program from the memory automatically, as soon as a preprogrammed magazine is loaded. Preprogrammed magazines are identified using the CD in the tray 1 of the magazine. Therefore be sure that tray 1 contains a disc.

### Programming

1. While a disc is playing, select the desired disc and track you want to program.
2. Press button [15] to memorize the track being played.  
("P-01" is indicated during the memory step.)
3. Procedures 1 and 2 above can be repeated until a maximum of 32 steps are programmed.
  - If the 33rd step is selected, the "FULL" display will appear, indicating that no more selections can be programmed.
  - When there are already a number of selections in the memory, the new selection will be added to the last step.

### Playing Back the Program

1. Hold down button [15] for 2 seconds to begin play in the programmed sequence, while a disc is playing.  
("PP01" is indicated during the step where the program is played.)
2. Press button [15] again to cancel program play.
  - Pressing the (+) or (-) side of button [7] during programmed play makes it possible to search for a specific step number from among the programmed selections.
  - Program play returns to the first step in the programmed sequence when it reaches the end of the program.
  - When playing a magazine that has no program recorded, "PP00" will be displayed for approximately 3 seconds.

### Erasing the Program

It is possible to erase one or all selections of the program in the magazine being played.

#### To erase a single selection:

1. Press the (+) or (-) side of button [7] during programmed play, and search for the specific step you wish to erase.
2. Press button [6] for at least 2 seconds and the selection being played will be erased.
  - After the particular track has been erased, the tracks in the next position move from down up one notch in the order from the previous position.

#### To erase the entire program:

While a disc is playing, hold down button [6] for at least 2 seconds. All the programs in the magazine being played will be erased.  
("P-CL" is indicated on the display.)



## Error Mode

Should an abnormality occur — for example, Multi-Play CD Player cannot be operated, or the music stops during CD playback — the main unit will indicate an error mode. (Example: "E-11")

While it the unit is in error mode, a number will be displayed indicating the cause of the error, so please check the items listed below. If you cannot fix the problem after checking the cause of the error, please contact your dealer or your nearest Pioneer service center.

### Note:

When using the Multi-Play CD Player, CDX-M100, CDX-M70, CDX-M50 and CDX-M40, an error will be displayed only in the form of "E-00", without the number which indicated the cause of the error. When this display appears, please check items 11, 12, 14, or 30 listed below.

Display	Cause	Treatment
11, 12	Dirt or a scratch on the disc stops the laser beam from being able to focus.	Wipe the dirt off the disc. Exchange the disc if it is scratched.
	The disc has been inserted upside down.	Confirm that the disc has been inserted right side up.
14	The disc has been inserted upside down.	Confirm that the disc has been inserted right side up.
	An unrecorded compact disc (CD-R), can be recorded on once is being used.	When you use a CD-R, load one that has been recorded on.
30	Dirt or a scratch on the disc hinders the track number search function.	Wipe the dirt off the disc. Exchange the disc if it is scratched.
80	An empty magazine is loaded in the multi-play CD player.	Insert a disc in the magazine.
10, 12, 50, 60, 70, A0	Electrical or mechanical system fault.	Turn the car ignition switch OFF, then ON again, or change to other sources except CD playback, and then to CD playback again. If the error indication does not disappear, contact your dealer or your nearest Pioneer service station.

- When error numbers not mentioned above are indicated, refer to the owner's manual accompanying the multi-play CD player.

## Connecting the Units

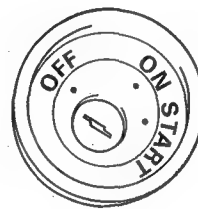
### Note:

- Before making final connections, make temporary connections then operate the unit to check for any connecting cord problems.
- Refer to the owner's manual for details on connecting the various cords of the power amp and other units, then make connections correctly.
- Be sure to connect the memory power supply lead (orange) to a terminal that is always supplied with power regardless of the vehicle's ignition switch position. If this connection is made incorrectly or is forgotten, the unit will not work at all.
- Don't pass the orange lead through a hole into the engine compartment to connect to the battery. This will damage the lead insulation and cause a very dangerous short.
- Since a unique BPTL circuit is employed, never wire so the speaker leads are directly grounded or the left and right speaker  $\ominus$  leads are common.
- Speakers connected to this unit must be high-power types possessing minimum rating of 30W and impedance of 4 to 8 ohms. Connecting speakers with output and/or impedance values other than those noted here can damage the speakers.

- When the unit is mounted in a vehicle whose ignition switch does not have the ACC (accessory) position as shown in Fig. 6, be sure to connect the red lead of the unit to the terminal controlled by the ignition switch ON/OFF position. If you do not, the vehicle battery may go flat when you leave your vehicle for several hours.



**ACC position  
(Fig. 5)**



**No ACC position  
(Fig. 6)**

### (Fig. 7)

1. Power amp (sold separately)
2. Connecting cords with RCA pin plugs (sold separately)
3. Blue
4. Green
5. Gray
6. Green/black
7. Gray/black
8. Green/red
9. Gray/red
10. Front/left speaker
11. Front/right speaker
12. Rear/left speaker
13. Rear/right speaker
14. White
15. Red
16. Rear out
17. Antenna jack
18. Blue  
To system control terminal of the power amp or Auto-antenna relay control terminal (Max. 300 mA 12 V DC).
19. Fuse holder
20. Fuse resistor
21. Black (ground)  
To vehicle (metal) body.
22. Red  
To electric terminal controlled by ignition switch (12 V DC) ON/OFF.
23. Orange  
To terminal always supplied with power regardless of ignition switch position.
24. Multi-play CD player terminal
25. Multi-play CD player (sold separately)
26. Use this for connections when you have the separately available amplifier.
27. With a 2 speaker system, connect to the 2 speakers in the front or the rear.

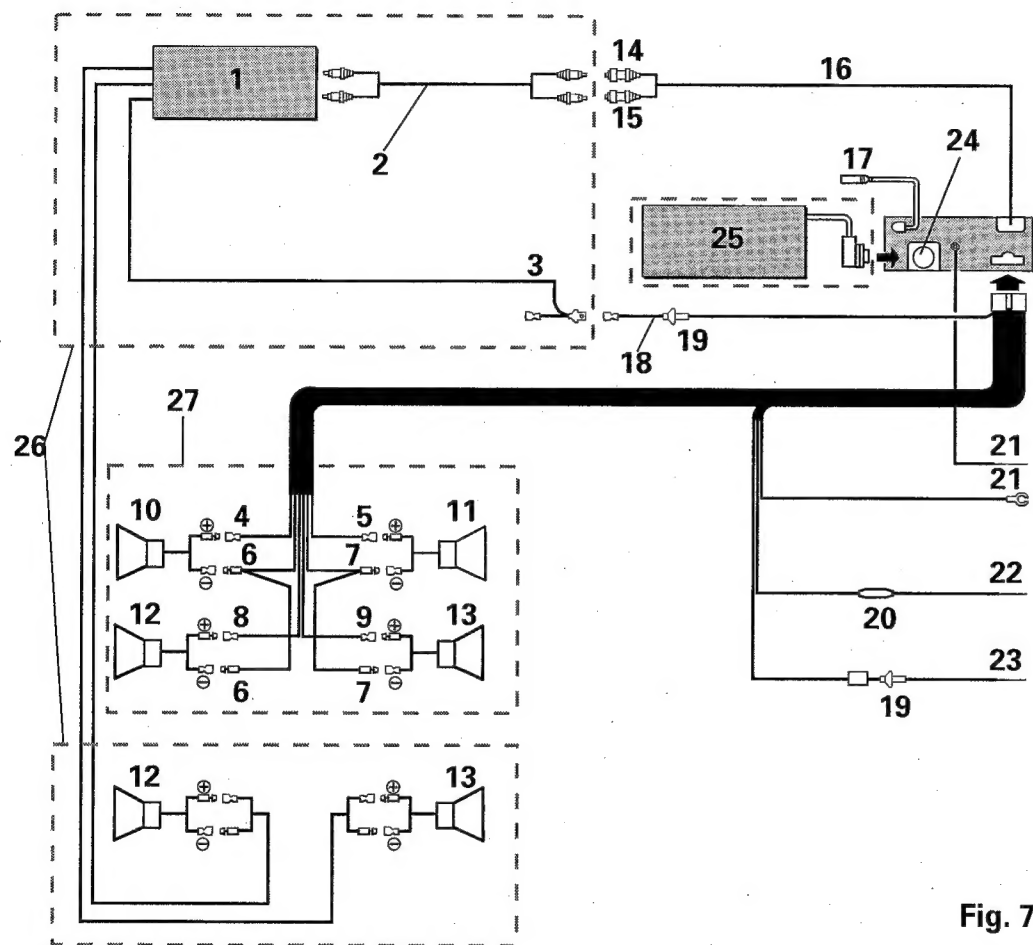


Fig. 7

## Installation

### Note:

- Use only the parts included with the unit to ensure proper installation. The use of unauthorized parts can cause malfunctions.
- Consult with your nearest dealer if installation requires the drilling of holes or other modifications of the vehicle.
- If installation angle exceeds 30° from horizontal, the unit might not give its optimum performance. (Fig. 8)

Fig. 9

1. Dashboard
2. Holder  
After inserting the holder into the dashboard, select the appropriate tabs according to the thickness of the dashboard material and bend them inwards to secure the holder in place.
3. Rubber bush
4. Screw
5. Ground wire (black)

## Removing the unit (Fig. 10, 11, 12)

Remove the front panel (refer to page 4).

6. Press this button.
7. Insert till the tab of the lever catches onto the metal fixture of the unit.  
(Point the tab of the lever upward.)  
The unit can be released from the dashboard by pulling the lever.
8. After removing the unit, pull out the lever, following step ①, ② shown above.
9. Tab

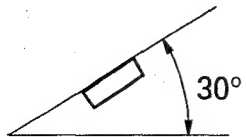


Fig. 8

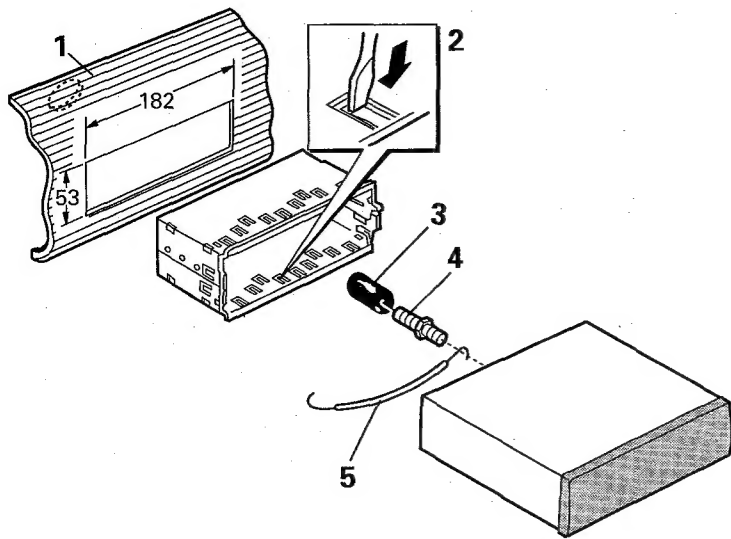


Fig. 9

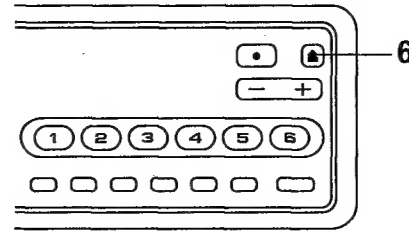


Fig. 10

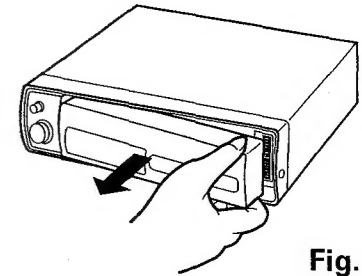


Fig. 11

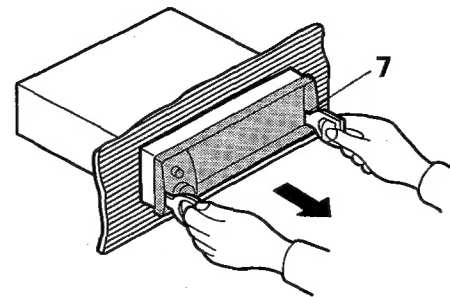


Fig. 12



# Specifications

## General

Power source..... 14.4 V DC (10.8 — 15.6 V allowable)  
 Grounding system ..... Negative type  
 Max. current consumption ..... 6 A  
 Dimensions (chassis) ..... 180(W) × 50(H) × 150(D) mm  
 (front face) ..... 188(W) × 58(H) × 18(D) mm  
 Weight  
 (KEH-M4500, KEH-M4000) ..... 1.4 kg  
 (GEH-M2000)..... 1.0 kg

## Amplifier

Maximum power output ..... 25 W × 2/15 W × 4 (EIAJ)  
 Continuous power output ..... 11 W × 2 (1% dist. at 1 kHz)  
 Load impedance..... 4Ω (4 — 8Ω allowable)  
 Preout output level/output impedance  
 ..... 500 mV/1 kΩ  
 Tone controls (bass) ..... ±10 dB (100 Hz)  
 (treble) ..... ±10 dB (10 kHz)  
 Loudness contour ..... +12 dB (100 Hz), +7 dB (10 kHz)  
 (Volume: -30 dB)

## Tape player (KEH-M4500, KEH-M4000)

Tape ..... Compact cassette tape (C-30 — C-90)  
 Tape speed ..... 4.8 cm/sec.  
 Fast forward/rewind time ..... Approx. 100 sec. for C-60  
 Wow & flutter ..... 0.13% (WRMS)  
 Frequency response  
 (KEH-M4500) ..... Metal: 40 — 17,000 Hz (±3 dB)  
 (KEH-M4000) ..... 40 — 14,000 Hz (±3 dB)  
 Stereo separation ..... 45 dB  
 Signal-to-noise ratio  
 (KEH-M4500)..... Metal: Dolby B NR IN: 63 dB (IEC-A network)  
 Dolby NR OUT: 55 dB (IEC-A network)  
 (KEH-M4000) ..... 52 dB (IEC-A network)

## FM tuner

Frequency range ..... 87.5 — 108 MHz  
 Usable sensitivity ..... 11 dBf (1.0μV/75Ω, mono, S/N: 30 dB)  
 50 dB quieting sensitivity ..... 16 dBf (1.7μV/75Ω, mono)  
 Signal-to-noise-ratio ..... 70 dB (IEC-A network)  
 Distortion ..... 0.3% (at 65 dBf, 1 kHz, stereo)  
 Frequency response..... 30 — 15,000 Hz (±3 dB)  
 Stereo separation ..... 40 dB (at 65 dBf, 1 kHz)

## MW tuner

Frequency range..... 531 — 1,602 kHz  
 Usable sensitivity ..... 18μV (25 dB) (S/N: 20 dB)  
 Selectivity ..... 50 dB (±9 kHz)

## LW tuner

Frequency range ..... 153 — 281 kHz  
 Usable sensitivity ..... 30μV (30 dB) (S/N: 20 dB)  
 Selectivity ..... 50 dB (±9 kHz)

## Note:

Specifications and the design are subject to possible modification without notice due to improvements.

## Composition du manuel

Ce manuel s'applique aux KEH-M4500, KEH-M4000 et GEH-M2000.

Toutefois, les illustrations montrent le KEH-M4500. Les KEH-M4000 et GEH-M2000 présentent les différences suivantes par rapport au KEH-M4500.

### KEH-M4000

Ne comporte pas le réducteur de bruit Dolby B, le sélecteur de bande et les fonctions de recherche de programmes.

### GEH-M2000

Ne comporte pas la fonction de lecteur de cassettes.

- La Fig. 1 montre le KEH-M4500 et le KEH-M4000.

Le GEH-M2000 ne comporte pas les touches [2] et [5] ni la porte [3].

## Précautions

- Lors du remplacement des fusibles, veillez à n'utiliser que des fusibles de même ampérage qu'indiqué sur le porte-fusible.
- Ne jamais ouvrir le boîtier supérieur de l'unité pour essayer de l'inspecter ou de le réparer. Si le fonctionnement de cette unité est anormal, prendre contact avec un concessionnaire ou le service Pioneer le plus proche.
- Si la batterie de la voiture se trouve débranchée pour quelque raison que ce soit, la mémoire de présélection sera effacée et la présélection devra être refaite après que la batterie ait été rebranchée.

### En cas de difficultés

Si votre unité ne fonctionne pas correctement, consultez votre distributeur ou le service autorisé PIONEER le plus proche.

## Utilisation de la façade amovible

La façade de cet appareil être enlevé pour éviter tout vol.

### Nomenclature (Fig. 1)

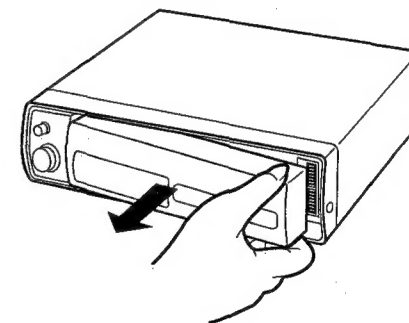
[2] Ejection

[5] Défilement rapide, rebobinage/changement de direction

[8] Touche de libération

### Dépose de la façade

1. Appuyer sur la touche [8], le côté droite de la façade se détache.
2. Pour déposer la façade, tirer son côté droit vers soi.



- Faire attention à ne pas appliquer une pression sur l'affichage ou de faire tomber la façade.

### Boîtier protecteur optionnel

Un boîtier protecteur vendu séparément [AD-931] est disponible pour ranger la façade détachée. Ce boîtier est vivement recommandé pour protéger la façade des chocs et des rayures.